

Experiences in Treating Cases of Gastrointestinal Heat Accumulation-Type Constipation-Type Irritable Bowel Syndrome with the Use of Jiawei Zuojin Pill

Zhang Huayi^{1,a}, Hui Jianping^{2,b,*}, Li Xinyi^{1,c}, Jia Lingna^{1,d}

¹Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, 712046, China

²Affiliated Hospital of Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, 712000, China

^a627690315@qq.com, ^bjbtm369@163.com, ^c1241838537@qq.com, ^d1871187133@qq.com

*Corresponding author

Keywords: Constipated-predominant irritable bowel syndrome; Stomach and intestinal heat accumulation type; Jiawei Zuojin Pill; Chinese medicine therapy

Abstract: Constipated-predominant irritable bowel syndrome (IBS-C) is one of the functional gastrointestinal disorders with an increasing global incidence year by year. The pathogenesis of IBS-C is currently unclear. Modern medical researchers still use the regulation of gastrointestinal dynamics, relieve gastrointestinal spasm, improve the microecological environment of the gastrointestinal tract and psychotherapy and other symptomatic treatment means, but often the efficacy is very small. And because IBS-C has a tendency to recur. It puts a very high level of financial and psychological pressure on the patient. In Chinese medical understanding, according to the characteristics of the pathogenesis of IBS-C and its clinical manifestations of abdominal pain and bowel difficulties, it is classified under the related names of "constipation, abdominal pain, intestinal knot". And IBS-C can be classified as gastrointestinal accumulation of heat type IBS-C by Chinese medicine diagnosis, combine the etiology and pathogenesis of gastrointestinal heat accumulation type IBS-C and the patient's morbid characteristics, examine the evidence and seeking the cause, and combining the four diagnoses. Chinese medicine practitioners chose the classic formula Jiawei Zuojin Pill, with its treatment of clearing the fire of the liver and stomach and regulating the qi of the liver and stomach, to adjust the functions of the internal organs, and make the stools smooth. Therefore, the efficacy of Zuojin Pills is widely praised by patients. The therapeutic means of TCM was then explored as a new development in the treatment of IBS-C.

1. Introduction

Irritable bowel syndrome (IBS) is a common functional gastrointestinal disorder. It is a group of syndromes in which repetitive abdominal pain, diarrhoea, abnormalities in faecal characteristics and changes in bowel frequency are the main symptoms and which lack significant structural or biochemical abnormalities of the gastrointestinal tract. Although IBS is not a seriously fatal disease. However, due to its pathological characteristics of being difficult to cure and prone to recurrence, it affects the daily life of the patients, their work, sleep status, psychological status and interpersonal

and social life, seriously reducing their quality of life and ability to learn and work. It also places a very large economic burden on society and self. In the Rome IV Standards, published by the Rome Foundation in 2016, based on changes in the frequency of defecation and abnormalities in faecal traits, IBS can be subdivided into the following subtypes: (1) IBS constipation type (IBS-C): $\geq 25\%$ hard or lumpy stools and 25% loose (mushy) or watery stools. (2) IBS diarrhoea type (IBS-D): $\geq 25\%$ loose (pasty) or watery stools and 25% hard or lumpy stools. (3) Mixed IBS (IBS-M): $\geq 25\%$ hard or lumpy stools and $\geq 25\%$ loose (pasty) or watery stools. (4) undetermined IBS (IBS-U): the character of the faeces does not meet any of the criteria for IBS-C, IBS-D, or IBS-M above. Of all the IBS subtypes, IBS-D is the more common, but with the rapid development of modern society, the incidence of IBS-C is also climbing. A meta [1] analysis in 2012 showed that the prevalence of IBS-C was 22.0% among IBS patients worldwide. However, in a European survey, the prevalence of IBS-C was 16% [2]. And it was found that the incidence of IBS, there is also variability in prevalence between genders, that is, the prevalence is higher in women than in men [1].

2. Progress of modern medical research on IBS-C

Modern medical research remains unclear as to the pathogenesis of IBS-C, however, many medical researchers believe that this functional gastrointestinal disorder is caused by a combination of factors. Based on the recognised pathogenic mechanisms of IBS such as gastrointestinal dynamics disorders, abnormal visceral sensitivities, lifestyle and dietary habits, intestinal flora dysbiosis, and abnormal function of the bacteria-gut-brain axis, research on closely related causative factors such as abnormalities of the intestinal immune system, intestinal infections, psycho-social factors, and vitamin D deficiency, etc., has also become a hot topic [3].

2.1. Disorders of gastrointestinal dynamics

IBS-C on clinically relevant investigations, as it has no obvious organopathological changes on imaging, are often diagnosed with a range of clinical manifestations of IBS-C resulting from gastrointestinal dysfunction. Therefore, in modern medical treatment, drugs related to regulating gastrointestinal dynamics are often used, such as domperidone tablets, trimethoprim maleate tablets and other related drugs.

2.2. Abnormal visceral sensitivity

Modern medical research suggests that visceral hypersensitivity is also an important cause of IBS-C. The brain-gut axis senses external mental factors that stimulate immune cells in the gut and release a variety of mediators that affect the intestinal nervous system, smooth muscle and intestinal barrier, resulting in abnormal visceral sensory sensitivity, cause otherwise harmless stimuli to cause pain and other related symptoms [4].

2.3. Lifestyle and dietary habits

Compared to the rest of the general population, it has been found that patients with IBS-C often have poor lifestyle habits that smoke and drink, overeat, not eat according to normal working hours, stay up late, and eat stimulating foods such as high calorie and sodium content and coffee. Thus, in contrast to healthy populations, the incidence of IBS-C is about three times higher in people with poor lifestyle and dietary habits.

2.4. Dysbiosis of intestinal flora

In recent years, the study of the mechanism of the bacteria-gut-brain axis has also become a hot topic. It has been found that in the intestines of healthy people there are numerous and varied groups of bacteria, the interdependence of the various strains of bacteria and their mutual constraints, therefore, it can maintain the ecological balance of flora in the intestinal system and achieve a mutually beneficial symbiotic relationship with the host organism. Whereas the majority of IBS patients show dysbiosis of the intestinal flora, this may lead to abnormal changes in the functioning of the bacteria-gut-brain axis, which can lead to numerous diseases of the digestive system. Numerous studies have shown a correlation between dysbiosis of the intestinal flora and the development of IBS-C.

Therefore, modern medical treatments are often to regulate gastrointestinal dynamics, relieve gastrointestinal spasms, improve the microecological environment of the gastrointestinal tract and psychotherapy and other related symptomatic supportive treatments, there are no targeted therapies, and often the healing gains are minimal.

3. Chinese medicine's research understanding of IBS-C

There is no exact name for "constipation-type irritable bowel syndrome" in Chinese medical literature. However, according to the characteristics of IBS-C and its clinical manifestations, it is categorised under the related names of "constipation, abdominal pain, and intestinal colonisation". Su Wen - The Five Viscera say, "The prana gate is also the envoy of the five viscera, and the water and grains are not allowed to be stored for a long time. "It was clarified that the excretion of stools is regulated and constrained by the functions of the five organs, and that the disease is located in the intestines, but is closely related to the lungs, the liver, the spleen, the stomach and the kidneys, explore its etiology, its occurrence and emotional disorders, dietary disorders, fatigue and body weakness, feel the external evil and many other factors related to especially close relationship with emotional disorders [5]. The pathogenesis of the disease is discussed in the Treatise on the Origins and Currents of All Diseases - All the Currents of Stool Disease: "difficulty in defecation is caused by the five viscera being out of tune, and yin and yang being partial to deficiency; it is said that if the triple jiao is not in harmony, then cold and heat are knotted together. "Taiping Shenghui Fang - Recipes for Treating Difficulty in Bowel Movement due to Deficiency and Labour say: "If a person with deficiency labour, the spleen and lungs are weakened, cereals are reduced, qi and blood are blocked, yin and yang are disharmonious, gastric qi is congested, the upper jiao is weak and hot, and the flow is injected into the large intestines, so it makes the secretion and astringency also. "Jifeng Puji Fang say: "Stool constipation stagnation has three three, kidney deficiency water less, carcass intestinal dryness and astringency, all make the large intestine secret stagnation. "That is to say, this disease is closely related to the lung's declination and purging, the stomach's acceptance, the spleen's transport and the kidney's warmth dysfunction. Jingyue Quanshu - Secret Knot say: "Where there is a deficiency of yang in the lower jiao, yang qi does not work, and if yang qi does not work, it cannot be transmitted, and yin condenses in the lower part of the body; this is a deficiency of yang and a knot of yin. "The Quorum of Evidence and Treatment - Miscellaneous Diseases say: "If the blood is deficient and the fluid is depleted and constipated, the pulse will be small and astringent, the face will be devoid of essence, the stools will be soft though, and the nu-chi will not come out [6]. "Among the many modern healers, Han Shutang [7] argues that the mechanism of IBS-C is "slow boat without sail" and "stop boat without water". That is, qi stagnation and yin deficiency, and yin deficiency, intestinal and visceral loss of nourishment for this, qi stagnation, intestinal and visceral conduction malfunction for the standard, the clinical treatment to dredge the liver and strengthen the spleen as the main, supplemented by regulating qi and nourishing the yin, softening the liver and moistening

the intestines and other methods. Wei Zuiping [8] argued the Dysregulation of the body's "ventilation" and "descending" functions is a major pathogenetic factor in the development of IBS-C, spleen deficiency and unfavourable transport and drainage of internal organs, so that the dross cannot go down, the treatment should be based on the main principle of dredging the liver and strengthening the spleen, and balancing the emotions. Zhang Jiahe et al [9] argued that the liver solidity, spleen deficiency, yin deficiency and dampness-heat are the main evidence elements of IBS-C, "liver depression, spleen deficiency, and disorders of the qi mechanism" are present throughout the development of the disease. The treatment method of "strengthening the spleen and dredging the liver" was proposed to treat the root cause, while "clearing heat and dispelling blood stasis, resolving phlegm and eliminating stagnation" was proposed to treat the symptoms. Huang Chiyao et al [10] argued that the liver qi stagnation is the main etiological factor of IBS-C, and the liver-dispersing method is crucial in the treatment of this disease. Director Long Huizhen [11] believes that The "root" of IBS-C is the congestion of the spleen and earth, "Standard" for the bowels of the bowels of the Qi Qi does not descend, so applied the method of opening the depression and moistening the spleen to treat IBS-C.

In conclusion, dysfunction of conduction in the large intestine is the basic pathomechanism of IBS-C, and its locus of disease is mainly in the large intestine, which is closely related to the spleen, stomach, liver, lungs and kidneys, and the diagnosis is mostly a mixture of deficiency and reality, resulting in a prolonged and difficult to cure condition. And in the cognitive domain of Chinese medicine, The TCM evidence of IBS-C was also classified as: evidence of liver depression and stagnation of qi, evidence of accumulated heat in the stomach and intestines, evidence of spleen and kidney yang deficiency, yin deficiency and intestinal dryness, and evidence of lung, spleen and qi deficiency, therefore, clinical treatment is often based on the principles of dredging the liver, clearing the stomach and removing fire, warming the spleen and kidneys, nourishing the yin and moistening the intestines, and tonifying the lungs and strengthening the spleen.

4. Exploring the treatment of gastrointestinal heat accumulation type IBS-C from the liver-cleansing and fire-dispersing therapeutic approach

Nowadays, people are fond of eating sweet and greasy food, thus damaging the spleen and stomach, causing the spleen and stomach to transport water and grains abnormally, food stagnation in the intestines, which is difficult to excrete, and over time, heat is transformed into heat, and the stomach and intestines become a knot, which leads to difficulty in discharging the stools, therefore, during the clinical process, it was found that patients with gastrointestinal heat accumulation type IBS-C were predominant, and the treatment was mostly based on clearing the stomach and diarrhoea. However, with the rapid development of modern society, under the pressure of life and work, affective factors leading to the occurrence of IBS-C have become more and more important factors, and an experimental study found that 5-hydroxytryptamine (5-HT) levels were significantly higher in the rat model of liver-qi stagnation compared with the control group. 5-HT, as a key transmitter in the brain-intestinal axis, regulates gastrointestinal dynamics, and the increase in 5-HT content in the gastrointestinal region when stimulated by external emotional and moral factors causes the contraction of the gastrointestinal tract's smooth muscle to become tonic and thus cause abdominal pain. It can be seen that the theory of sensitivity of the internal organs in Western medicine coincides with the pathogenesis of "internal movement of wind qi" in Chinese medicine. Therefore, in the understanding of Chinese medicine practitioners, the liver is the organ of the wind and wood, the main drainage and blood storage of its gas to rise and like to reach and evil depression [12], liver stagnation, the internal organs of the gas does not descend, the large intestine conduction dereliction of duty, resulting in dregs of the internal stopping, which can lead to constipation. As Supplement to

the Notes on the Essentials of the Golden Chamber say: "The liver is responsible for evacuating the bowels, and when liver qi is reversed, it is not evacuated, so it is difficult to pass stools [13]. "However, IBS-C disease time is often not a short period of several months, but up to several years, although the liver is the main emotional, but if the liver stagnation for several years, the long time must be turned into heat, heat is damage to the intestinal fluid, intestinal dryness and fluid wither, then stool difficult to go down; or because the Liver-Mu is overriding the Spleen-Earth, it will cause the Spleen and Stomach to lift and move abnormally, and then the stomach and intestines will become hot, or cause food to accumulate in the intestines, making it difficult to excrete. All of these may lead to the occurrence of gastrointestinal heat accumulation type IBS-C. Guidelines for the Treatment of Stools - Inability to Pass Stools say: "When fire burns the fluids, the dryness of the bowels will become a state of constipation. "Constipation in gastrointestinal heat type IBS-C is often manifested by constipation, hard stools like sheep's faeces, effortful discharge, anal swelling, accompanied by distension and burning pain under the hypochondrium, bitter and dry mouth and throat, headache, short and reddish urine, red tongue, yellowish greasy moss, and number of strings in the pulse. Due to the fire-heat evil upward disturbance of the gods, dizziness, irritability, insomnia and other clinical symptoms can also be seen. Its pathogenesis is mainly liver meridian depression and heat, which moves down to the stomach and intestines. The mainstay of treatment should be to clear the liver and eliminate fire, remove heat and pass stools. In the treatment, the main purpose should be to clear the liver and diarrhoea, diarrhoea and heat, supplemented by dredging the liver and regulating the qi. Discriminatory Record - Constipation say: "To open the closure of the large intestine, you must first diarrhoea the fire of the liver and wood. "Therefore, the treatment of the disease must seek the root cause, for the treatment of gastrointestinal accumulation of heat type IBS-C, you can dredge the liver to regulate qi and clear the liver fire as the principle of treatment.

5. Treatment of gastrointestinal heat accumulation type IBS-C from Jiawei Zuojin Pill

The Zuo Jin Pill formula is from Dan Xi Xin Fa - Fire VI, which is composed of Huang Lian and Wu Zhu Yu in the ratio of 6: 1, the action of the original formula is only to "diarrhoea liver fire". Although this formula is simple to adapt to a wide range of not only can clear the fire of the liver and gallbladder can also diarrhoea gastrointestinal heat and have and stomach to reduce the reversal of the acid to stop vomiting and other efficacy for the representative of the formula of the pungent open and bitter descending, the main treatment of gastric real heat [14]. In Zuo Jin Pill, Huang Lian and Wu Zhu Yuan are a pair of medicines that match cold and heat, and they check and balance each other. The first one can enter the liver meridian to clear the liver fire, the second one is good at clearing stomach heat; the third one is diarrhoea of heart fire, which implies the meaning of "diarrhoea of the son when it is real". However, the evidence of gas depression and fire, only the use of bitter and cold products, both the fear of depression is not open and the anxiety of folding in the yang, so less with the pungent and hot medicine Wu Zhu Yu its main into the liver meridian, in order to make the liver gas to open up the depression; it is also used to control the cold of Coptis so that the fire can be eliminated without the disadvantage of cold curbing; firstly, it is taken for its use in lowering the qi so as to harmonise the stomach and lowering the rebelliousness; secondly, *Cornus officinalis* can lead Coptis to enter the liver meridian, so that it is a single flavour with the function of being used as an adjuvant for four purposes. The combination of these two medicines is effective in clearing and eliminating liver fire, lowering the rebelliousness and stopping vomiting. In modern pharmacological studies, Zuojin Pill has significant effects on the treatment of peptic ulcer, reflux oesophagitis and other digestive disorders, which can significantly increase intragastric pH and regulate the relationship between the thalamo-pituitary-adrenocortical axis, as well as regulating gastrointestinal dynamics, antibacterial, analgesic and anti-inflammatory and other multiple effects [14]. However,

modern medical research on the pathogenesis of IBS-C is intricate and complex, only one side of the Zuojin Pill alone is afraid of little therapeutic effect, this is why later generations of medical practitioners have taken the essence of the medicine and created their own Jiawei Zuojin Wan, which is used to treat many modern digestive disorders. Zuojin Pill (Jiawei Zuojin Pill, JZP) is composed of 14 Chinese medicinal materials, including Jiang Huanglian, Huang Qin, ChaiHu, Muxiang, XiangFu, YuJin, ChenPi, BaiShao, QingPi, ZhiQiao, YanHusuo, DangGui, GanCao[15]. In the formula, Rhizoma Coptidis and Cornu Cervi Pantotrichum are the two drugs, Rhizoma Coptidis clears away heat and fire, Cornu Cervi Pantotrichum is pungent and warm, and it has the function of opening up depression and dispersing knots, and lowering the qi to reduce the rebelliousness. Chai Hu, Mu Xiang, Yan Hu Suo, Xiang Fu, Yu Jin, Citrus aurantium, Chen Pi, Qing Pi detoxifies the liver and regulates qi, harmonises the stomach and relieves pain, and the 8 herbs are all for regulating qi and acting on qi, and together they are the ministerial herbs. HuangQin is bitter cold and clears heat, while DangGui and BaiShao, both of which enter the blood, nourish the blood and soften the liver, preventing the depletion of fluid and injury to yin caused by hard work, and are used together as adjuvants. GanCao harmonises all the herbs and becomes the enabler. Combined, Jia Wei Zuo Jin Pill has the effect of clearing the liver and fire, harmonising the stomach and relieving pain. Therefore, according to the etiology and mechanism of gastrointestinal heat accumulation type IBS-C, later generations of medical practitioners also often use this formula to treat gastrointestinal heat accumulation type IBS-C, and the efficacy is also widely praised by patients.

6. Case examples

Patient Chen Moumou, male, 52 years old, in April 2023 in our hospital outpatient clinic initial consultation, electronic colonoscopy has not seen obvious abnormalities. Present symptoms: difficult to pass stools, even more than ten days a line, dry quality, in the form of sheep's dung, and accompanied by burning pain in the oblique ribs, bitter mouth and dry throat, burning pain in the abdomen, sometimes tinnitus, head and eyes distension, emotional irritability, observation of his tongue: tongue red with yellow fur, pulse: string slippery. He was diagnosed with constipation-type irritable bowel syndrome, diagnosis: gastrointestinal heat accumulation type. Treatment: dredge the liver and regulate qi, clear the liver and diarrhoea. Prescription: Jiang Huanglian12g, Wu ZhuYu4g, Huang Qin6g, Chai Hu12g, Mu Xiang6g, Yu Jin10g, Bai Shao15g, Zhi Qiao10g, Chen Pi12g, Yan Hu suo10g, Dang Gui12g and Gan Cao6g. Take one dose daily, decocted with water and divided into morning and evening for warm consumption, ten doses for a course of treatment. 2023 May second diagnosis: stools 2-3 days / line, slightly dry, occasionally oblique ribs abdomen burning sensation, urine can be. Tongue and pulse: red tongue with white coating and slippery pulse. Diagnosis is the same as above, the above formula to get rid of Mu Xiang accompanied by Shao Yao 15g, Sheng Dihuang 8g, seven doses of water decoction. After the service, follow-up, the patient complained of a line of stool, soft, less irritable, oblique rib distension and pain. The patient was advised to follow the original formula of 1 serving every other day for 1 month to consolidate the follow up and no recurrence was seen.

Patient Li Moumou, female, 31 years old, was first seen in our hospital in May 2023, the patient complained of: every time when the mood is irritable, it is difficult to go down the stools, dry stools, accompanied by moodiness, dry mouth and bitter mouth, noisy stomach and epigastric cavity, oblique ribs hidden pain, poor appetite, yellow urine colour. Tongue and pulse: red tongue with yellowish greasy coating, sunken stringy pulse. He was diagnosed as constipation-type irritable bowel syndrome, evidence type: gastrointestinal heat accumulation type. Prescription: Huang Lian12g, Wu Zhuyu4g, Huang Qin6g, Chai Hu12g, Mu Xiang6g, Yu Jin6g, Lai Fuzi30g, Jin Qiancao15g, Bing Lang15g, Zhi Qiao12g, Chen Pi10g, YanHusuo10g and Gan Cao6g. Ten doses of water decoction, and then

follow up with the patient, a line of stool day, the amount can be, shaped, emotional comfort, can work and study and life normally.

7. Summary

Jiawei Zuojin Pill's action of clearing the fire in the liver and stomach as well as laxative effect is through adjusting the function of the internal organs to make the stools smooth. The patient has difficulty in passing stools for many years, and if we examine the evidence from the source to find the cause, it is often due to emotional factors such as liver depression and fire, resulting in the accumulation of heat in the intestines and stomach and the depletion of intestinal fluid, which leads to constipation, Jiawei Zuojin Pill in Wu Zhuyu officinalis Xin Wen Fang Lie Tong blood paralysis, open the coupling to ascending and descending turbidity, open the depression and stagnation of the liver under the qi and can be dispersed gastric qi stagnation with antidiarrheal, laxative "biphasic regulating effect" and the Huanglian together with the XinKaiBituLeak descending gastric dispersal of knots. Chen Pi, Mu Xiang can regulate qi and calm the stomach with Zhi Qiao can lift the middle yang and resolve the liver and depression of the combination of all the drugs, the liver is clear and the stomach descends, the spleen is strong and healthy and the clear ascends and the turbid descends, thus the persistent constipation can be cured [16].

For this disease, Western medicine usually treats it by regulating gastrointestinal dynamics, relieving gastrointestinal spasm, improving the micro-ecological environment of the gastrointestinal tract, and psychotherapy, with general and limited overall efficacy, high recurrence rate, and high medical costs. The effect of Chinese medicine in the treatment of constipation-type irritable bowel syndrome is remarkable, focusing on the overall concept, evidence-based treatment, with the advantages of improving symptoms, improving the quality of life, unique therapeutic effects, and few side effects. Jiawei Zuojin Pill is an empirical formula clinically proven for many years in the treatment of digestive system, which significantly improves the symptoms of patients by clearing the liver and laxing the fire, moistening the bowels and relaxing the bowels, which is of great significance in improving the quality of life of the patients, promoting the recovery of the disease, and guiding the clinical treatments. The above case experience has enabled more medical researchers to understand the new direction of Chinese medicine in the treatment of gastrointestinal heat accumulation type constipation-type irritable bowel syndrome. The treatment of constipation-type irritable bowel syndrome with gastrointestinal heat build-up is not solely based on the conventional treatments agreed upon by the Western medical research institutes or the traditional thinking and evidence-based models agreed upon by the majority of practitioners of Traditional Chinese Medicine. We can cite scriptures and find another way to treat patients with gastrointestinal heat accumulation type of irritable bowel syndrome from other new identification ideas, which will not only make the clinical efficacy greatly improved, but also have high safety and reduce the recurrence rate, so as to make TCM therapies play more and more important roles in clinical treatment.

References

- [1] Drossman DA. *Functional Gastrointestinal Disorders: History, Pathophysiology, Clinical Features and Rome IV*[J]. *Gastroenterology*, 2016, 150(6): 1262-1279.
- [2] Francis CY, Morris J, Whorwell PJ. *The irritable bowel severity scoring system: a simple method of monitoring irritable bowel syndrome and its progress* [J]. *Aliment Pharmacol Ther*, 1997, 11(2): 395-402.
- [3] Zhao Erying, Zhou Jiawei, Chu Haiyun, et al. *Epidemiology and pathogenic factors of irritable bowel syndrome: a review on research progress* [J]. *Chinese Journal of Public Health*, 2021, 37(04): 764-768.
- [4] Yang Xiao, Wu Fucang, Kan Xiangling. *Experience of treating diarrhea type irritable bowel syndrome based on "visceral hypersensitivity theory"* [J]. *Journal of Tianjin University of Traditional Chinese Medicine*, 2022, 41(06): 706-709.

- [5] Chen Xiaoteng, Ma Weiming's experience in identifying and treating irritable syndrome [J]. *Zhejiang Journal of Traditional Chinese Medicine*, 2009, 44(09): 637.
- [6] Cao Zihan, Cao Zhiqun. Advances in TCM Treatment of Constipation-Type Irritable Bowel Syndrome [J]. *Traditional Chinese Medicine Journal*, 2023, 22(03): 69-72.
- [7] Zhang Xu, Hu Yan, Xiao Ting, et al. Han Shutang's Experience in Treating Constipation Irritable Bowel Syndrome[J]. *Asia-Pacific Traditional Medicine*, 2021, 17(7): 126-128.
- [8] Wei Cuiping. Effectiveness of Lizhong Tang combined with Hovenia Tang in the adjuvant treatment of constipation-type irritable bowel syndrome [J]. *The Journal of Medical Theory and Practice*, 2021, 34(14): 2431-2433.
- [9] Zhang Jiahe, Li Hui. Study on the Prescription Rule of Traditional Chinese Medicine in the Treatment of Constipation Predominant Irritable Bowel Syndrome [J]. *Chinese Journal of Ethnomedicine and Ethnopharmacy*, 2021, 30(12): 9-13.
- [10] Huang Chiyao, Yi Wen. Research progress of Chinese medicine treatment of constipated irritable bowel syndrome [J]. *Guangming Journal of Chinese Medicine*, 2021, 36(9): 1539-1541.
- [11] Lv Yaping, Ma Lei, Wang Delong, et al. An analysis of the treatment of constipation-type irritable bowel syndrome by the method of opening depression and moistening the spleen [J]. *Zhejiang Journal of Traditional Chinese Medicine*, 2021, 56(4): 302.
- [12] Gu Juan, Li Zeng. Treatment of constipation-type irritable bowel syndrome based on "facilitating hepatic stagnation" theory [J]. *Clinical Journal of Chinese Medicine*, 2023, 15(03): 69-71.
- [13] Zhang Liju, Zhang Baixue, Liu Shaoneng. Experience and experience in treating functional constipation from liver theory [J]. *Hebei Journal of Traditional Chinese Medicine*, 2023, 45(04): 651-654.
- [14] Kong Weijun, Zhao Yanling, Shan Limei, et al. Progress of Zuojinwan [J]. *Chinese Journal of Experimental Traditional Medical Formulae*, 2008(05): 73-77.
- [15] Chen Huipeng, Wang Yin, Chen Xiangling, et al. Simultaneous determination of 13 bioactive components in Jiawei Zuojin Pill by HPLC-MS/MS[J]. *Chinese Traditional and Herbal Drugs*, 2020, 51(14): 3693-3699.
- [16] Luo Zhongqiu. Treatment of intractable constipation with Jiawei Zuojin Wan [J]. *Jiangxi Journal of Traditional Chinese Medicine*, 2005(02): 59.